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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Sven Bernhard

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EXAMINER

HOANG, PHUONG N

ART UNIT

PAPER NUMBER

2194

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/720,057	Applicant(s) BERNHARD ET AL.	
	Examiner PHUONG N. HOANG	Art Unit 2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 2, 4 - 14, 16 - 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 - 2, 4 - 14, 16 - 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1 – 2, 4 – 14, 16 – 21 are pending for examination.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 04/17/09 has been entered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 1, 2, 4 – 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vasudevan, US pub. no. 2004/0225805 in view of Allen, US patent no. 6,934,956.

5. As to claim 1, Vasudevan teaches a method comprising:

providing an interface (network interfaces abstraction 22, figure 1 and associated text, especially [0014]) to access a plurality of peripheral devices (peripheral devices, [0015, 0018]), the interface being independent of specific features of the peripheral devices and having a plurality of generic routines (socket API's corresponding to those devices, [0014]) commonly shared by the peripheral devices;

upon receipt of a request for a feature (peripheral device that is desired to communicate with, [0021]):

identifying, by the interface, a peripheral device capable of performing the specific feature corresponding to the feature requested (peripheral device that is desired to communicate with, [0021]):

determining, by the interface, from the request the specific features of the identified peripheral device (IPX address, sockets, [0020 – 0023]);

calling, by the interface, the generic routines as a function of the feature of the identified peripheral device (opening the sockets corresponding to the peripheral device the application desires to access, [0020 - 0023, 0026]);

performing on the identified peripheral device the specific feature corresponding to the feature requested (the message can be processed by the peripheral device to perform a desired function, [0026]);
executing a native driver of the identified peripheral device (driver, [0004, 0023]).

Vasudevan does not explicitly teach the step of providing a plurality of parameters to define specific features of the peripheral devices.

Allen teaches providing a plurality of parameters to define specific features of the peripheral devices (the computer send print job to printer through printer driver using the correct parameters, col.1 lines 32 – 45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teachings of Vasudevan and Allen because the correct parameter would contain information of the device requested to connect to the driver to send input/output to the device (Allen; col. 1 lines 32 – 45).

6. **As to claim 2**, Allen teaches wherein providing a plurality of native drivers to control the peripheral devices (drivers, col. 1 lines 32 – 45).

7. **As to claim 4**, Vasudevan teaches upon the execution of the native driver, accessing the requested peripheral device ([0015, 0018]).

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8. **As to claim 5**, Vasudevan teaches upon receipt of another request, using the interface to call the generic routines as a function of specific features of another requested one of the peripheral devices (peripheral device that is desired to communicate with, [0021]).

9. **As to claim 6**, Allen teaches wherein one or more of the peripheral devices are selected from the group consisting of a printer, a scanner, an imager, a smart card reader, and a barcode reader (printer, col. 1 lines 32 - 45).

10. **As to claim 7**, Vasudevan teaches wherein the request is a request from an application to connect to the requested peripheral device (peripheral device that is desired to communicate with, [0021]).

11. **As to claims 8 and 9**, Vasudevan teaches wherein the request is a request from an application to connect/disconnect to/from the requested peripheral device ([0021]).

12. **As to claim 11**, Allen teaches providing a graphical user display to allow a user to select the peripheral devices to be accessible by the interface (col. 3 lines 25 – 35); and providing native drivers corresponding to the selected peripheral devices.

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13. Claims 12 – 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Khanna, US pub. no. 2002/0147870 in view of Edmonds, US pub no. 2003/0231329.

14. As to claim 12, Khanna teaches a method comprising:

providing a connection class to include generic routines to connect to peripheral devices, the connection class to be independent of device-specific features of the peripheral devices (abstraction layer interface has access methods for various devices, [0017, 0024]),

providing a plurality of parameters to define specific features of the peripheral devices (identification number, resource access commands, [0017]);

receiving a request to access one of the peripheral devices (request to access the device... used to access the device, [0017]);

determining whether the requested peripheral device is accessible (verifies the identification, [0017]);

using the instantiated object to cause a native driver of the requested peripheral device to execute (0024, 00270], and

connecting, through the native driver, the computer to the requested peripheral device (access to devices, [0024]) based upon the parameters of the requested peripheral device (identification number, resource access commands, [0017]);

Khanna does not explicitly teach the steps of if the request is a request to connect a computer to the requested peripheral device, cause requested peripheral device to execute; if the request is a request from the requested peripheral device to

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send data to the computer, notifying the computer that the requested peripheral device has the data, and sending the data from the requested peripheral device to the computer.

Edmonds teaches

determining whether the requested peripheral device is accessible (responds to user's input, broadcast printer's identification information ... printer, 0009);

if the request is a request to connect a computer to the requested peripheral device, cause requested peripheral device to execute (the printer driver receives the user-selected printer, the user's print job is directed to that printer, 0007, 0009, 0015, 0022);

if the request is a request from the requested peripheral device to send data to the computer, notifying the computer that the requested peripheral device has the data, and sending the data from the requested peripheral device to the computer (when the print job is completed, the printer sends a message user's PC, 0021).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Khanna and Edmonds because Edmonds's determining the accessible peripheral device would allow user to make physical connection to the desired peripheral device such as printer as need (0009).

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15. **As to claim 13**, Edmonds disconnecting the computer from the requested peripheral device when there is no printing request needed (closeprinter, page 9).

16. **Claims 14 and 16 – 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edmonds, US pub. no. 2003/0231329 in view of Allen, US patent no. 6,934,956.**

17. Edmonds reference was cited in previous office action.

18. **As to claim 14**, Edmonds teaches a system comprising:

at least one peripheral device (printer, 0007) having associated therewith a native driver (printer driver, 0007 - 0011);

a memory device storing a plurality of parameters to define specific features of the at least one peripheral device (printer's model name and distinguishing network information are cached on the user's computer for further use, [0008, 0009]);

a mobile computer (laptop, 0007) configured to provide an interface (generic driver interface, 0007 - 0011) used by an application to access the at least one peripheral device (the printer driver is capable of controlling select that printer, 0015, 0024), the generic routines cause the native driver installed on the computer

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driver to execute and control the peripheral device (printer driver, installed on the laptop or personal computer, has the capability to control a plurality of different printer types, [0007 – 0011, 0015, 0022]), the interface being independent of device-specific features of the at least one peripheral device.

Edmonds does not explicitly teach the steps of call a plurality of routines as a function of a request for a feature requested based upon the parameters of the peripheral device.

Allen teaches call a plurality of routines as a function of a request for a feature requested based upon the parameters of the peripheral device (the computer send print job to printer through printer driver using the correct parameters, col.1 lines 32 – 45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teachings of Edmonds and Allen because the correct parameter would contain information of the device requested to connect to the driver to send input/output to the device (Allen; col. 1 lines 32 – 45).

19. **As to claims 16 - 17**, Edmonds teaches wherein the mobile computer is further configured, upon receiving a request from the peripheral device to provide data to the application (0009).

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20. **As to claim 18**, Edmonds teaches wherein the computer is further configured, upon receiving a request to access the at least one peripheral device, to use the interface to call a plurality of routines as a function of the device-specific features of the at least one peripheral device, and upon receiving a request to access a second peripheral device (the second of various printers, 0015), to use the interface to call the plurality of routines as a function of the device-specific features of the second peripheral device.

21. **As to claim 19**, Edmonds teaches a second mobile computer (a second of mobile professionals, 0004), having the application ported thereto, configured to access a different peripheral device (printers) with the application, wherein the application on the second mobile computer uses the interface to access the different peripheral device without modifying the application.

22. **As to claim 20**, Edmonds teaches wherein the mobile computer uses the interface (figure 2 and associated text) to limit communication with the at least one peripheral device to one request at a time.

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23. **As to claim 21**, Edmonds does not explicitly teach wherein the generic routines include a routine to send data to the peripheral device and to collect data from the peripheral device.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the same routines for sending and receiving data to eliminate or reduce coding and therefore, convenience for maintenance.

24. **Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vasudevan, US pub. no. 2004/0225805 in view of Allen, US patent no. 6,934,956, and further in view of Dorris, US patent no. 5,867,710.**

25. Dorris reference was cited in previous office action.

26. **As to claim 10**, Vasudevan and Allen do not explicitly teach providing an emulator to simulate access to the peripheral devices in order to test the interface.

Dorris teaches providing an emulator to simulate access to the peripheral devices in order to test the interface (HAL test, abstract, col. 1 figures 3 and 4 and associated text).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Vasudevan, Allen, and Dorris's system

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because the test would make sure the devices would properly operate with the interface (col. 2 lines 20 – 35).

Response to Arguments

27. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

28. Applicant argued that Edmond's bacon is not the native driver installed on the computer (page 9)

In response, examiner remapped to clearly cite the limitation the native driver (printer driver, installed on the mobile/personal computer, has the capability to control a plurality of different printer types, [0007 – 0011, 0015, 0022]).

Conclusion

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PHUONG N. HOANG whose telephone number is (571)272-3763. The examiner can normally be reached on Monday - Friday 9:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyunh S. Sough can be reached on 571-272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hyung S. SOUGH/
Supervisory Patent Examiner, Art Unit 2194
07/04/09

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Examiner, Art Unit 2194